

Accessing the Wisdom of Your Body: Balancing the Three Brains

By Mark Chandlee Taylor

Does your mind tend to run in circles, obsessing about the future, reliving past events, and endlessly strategizing how to respond to each new issue? Do you have a feeling of being closed off from others, not relating fully to the world? Do you live with chronic gastric, nervous, and muscular distress? If you answered yes to several of those questions, you may have forgotten how to balance your multiple centers of wisdom, and—like many others in Western culture—you may be attempting to navigate through your precious lifetime solely from the brain in your head. Most of us are not aware that we have other choices, that we possess other centers of wisdom, which, if we listen to them, can radically alter our way of being in the world. Utilizing these multiple centers can decrease stress, relieve chronic anxiety, and enable us to relate more easily and fully with others.

Since the time of the Enlightenment, Western culture has increasingly valued the wisdom of the head-brain—conscious thought and control of thought—over alternative perceptual and integrative systems in the body. The Cartesian formula “I think, therefore I am” is the sort of logical formulation that epitomizes Western thought which gives the head-brain primacy over other neural systems—brains—that exist in our bodies. Our educational systems reinforce this prejudice, and our visually-based digital culture further emphasizes the perceptual processes of our head-brain over other ways of knowing.

Recent research shows that there are actually three major centers of neural intelligence and integration in the body: the enteric brain in the gut¹, the cardiac brain in the heart², and the central nervous system housed within the head and spinal cord—which I’ve been calling the “head-brain.”

What Is a Brain?

A brain is a neural processing center into which information enters from the environment through sensory pathways. Information is then processed by interneurons to which instructions for action emerge through motor pathways to the rest of the body. The

brain allows for a profound cycle of interaction to occur between the being and the world. This great cycle of being creates a multi-dimensional matrix in which we take in the environment through our sense organs, gather and integrate that sensory information within our brains, interpret or perceive information, and finally, move our bodies in response viz. speech, action, and/or expression—to begin the cycle anew, without pause. As human beings, our existence is embedded in this unending matrix of experience composed of sensing the environment, perceiving and relating to what we sense, and moving into the world in response.

Until recently, only the head-brain was acknowledged to serve these functions. Now it is evident that in each moment of our lives, our three brains process uncountable bits of information simultaneously, relating them to each other and acting on them in conscious and subconscious ways. In 1998, Dr. Michael D. Gershon published his findings regarding the *enteric brain*, the nervous system of the gut. He synthesized several generations of research that have contributed to the understanding that the digestive tube has vast intelligence independent from the central nervous system, stemming from a system that includes sensory nerves, interneurons, and motor nerves.³ More recently the *cardiac brain* has been recognized as yet another independent center of intelligence.⁴

By acknowledging, embodying, and listening to your gut knowledge and heart wisdom as well as to the intelligence of your head-brain, you can begin to enjoy the benefits of functioning more as a whole and take advantage of sources of natural wisdom that most people don't even know exist. To do that, you have to be able to attend to and differentiate among your three brains experientially. Somatic movement awareness offers a way to explore the relationships among your three brains from the perspective of your own experience. As you read this article, I invite you to experiment with how it feels to contact, move, breathe, and enjoy your multiple centers of awareness. Here is an exercise to get you started.

Movement Exploration: The Gut, Heart, and Head

Walk around a quiet room and trace the bones of your skull with your hands. Let your hands carry the weight of your head. Feel your brain resting inside the skull while your hands change the position of your head in space. Follow whatever movement arises.

Maintaining awareness of your brain tissue, continue walking while you trace your sternum and ribs with your hands. Move your bones manually so that the contents of your thorax are moved inside the bones, and let your heart begin to fall into your hands through your ribs. Allow it to move in all directions and follow whatever movement arises.

Maintaining awareness of your brain and your heart, continue walking while you bring your hands to your abdominal cavity. Feel its dimensionality, letting your sides, your belly, and your low back fall into your hands. Let your guts begin to lead the dance.

Move freely, changing levels, speed, and your relationship to earth and heaven. As you move, maintain a relationship of flow between your three brains, letting the movement of each one inform the others. Which brain center do you tend to initiate with, and which ones are less activated?

Having warmed up, you are ready to move into the experience of listening to your three brains. Without knowing it, we often respond to stimuli first from the gut or heart, but we are acculturated to respond as though our head-brain were in charge. As a result, we cease acknowledging that the lower centers have any intelligence or responsiveness at all.

As an experiment, do the exploration below with a partner. You will be asked a series of questions. Your job is not to answer the question verbally, but to feel which brain is activated in response to each question. (Automatically responding to a question with language is a habit that keeps us in the world of the head-brain, since forming verbal responses is an action of that brain.) Notice where in your body you feel the question lodge—the sensation might be like a light bulb being lit, a tightening, or an energetic activation—and notice whether you respond by thinking in the head-brain, feeling in the heart-brain, or allowing gut intuition to work. Most people are surprised to realize that they habitually ignore their heart- and gut-brain responses. We find that, when we take time to attend deeply to ourselves, different questions ignite activity in different brains.

Exploration: Responding with the Gut, Heart, and Head

Allow your partner to get comfortable and invite her to breathe and release her weight into the floor. Each time you ask her a question, give her time to feel and digest the response. Ask your partner to notice which brain—gut, heart, or head—responds to or is excited by each question, and then to compare her body's responses to the questions. Ask these questions:

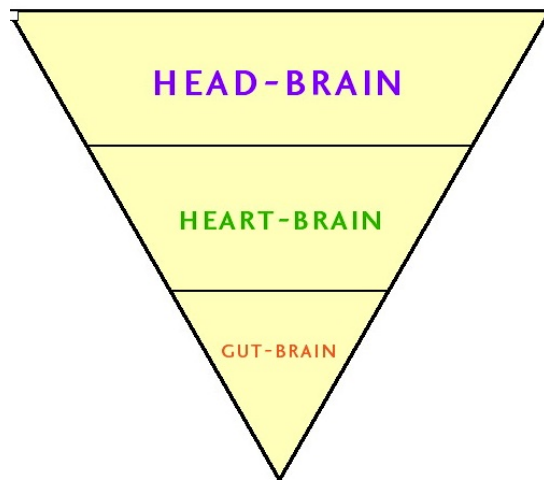
How are you today?

How are you this week?

How are you this month?
How are you this year?
How are you in this lifetime?

Discuss your partner's reactions to those questions, and change roles.

The Traditional Model



If we were to illustrate the relative value given to the brains of the head, heart, and gut according to the traditional Western point of view, we would have an inverted pyramid, as in the figure at the left. At the top is the head-brain, which we are taught is our primary and most important center of wisdom. Most of us allow our self-perception to support that idea. In the middle of the pyramid, much reduced in size of

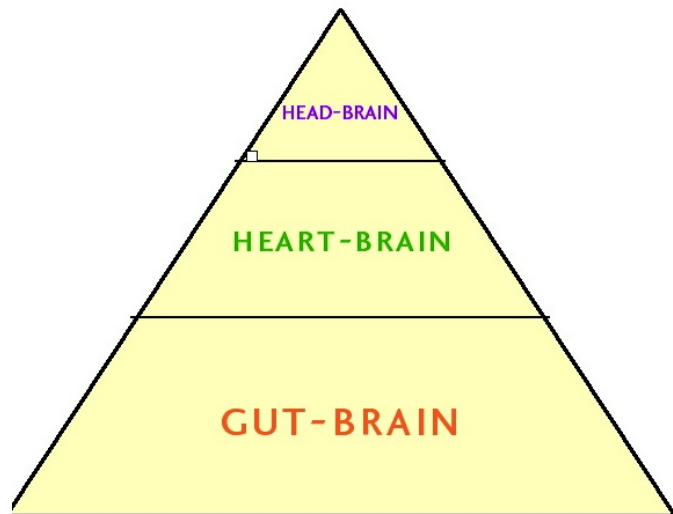
value, is the heart-brain. Our language has information embedded in it about heart's wisdom and function. We talk about the heart's knowledge, but those discussions, being the province of poets, lyricists, and religious mystics, are marginalized in serious discourse. At the bottom of the inverted pyramid is the gut-brain. Culturally, it is almost unthinkable that the gut has the ability to function as a center of intelligence, despite the fact that we casually attribute wisdom to it, as when we say "I know it in my gut."

Look again at that pyramid. Balanced on a tiny tip, it is clearly an unstable model of intelligence. Its most complex and energetically demanding portion, the head-brain, occupies a huge space at the top, while the simple gut-brain is relegated to the small, precarious foundation. A pyramid standing on its head is obviously in danger of toppling, and requires a great deal of effort to hold itself in place. What are the ramifications of a culture based on that instability, with little acknowledgment of or value given to the wisdom of the heart and gut? We can look at our families, cities, and nations as products of that value system. Our unbridled drive for technological advancement, our ability to

ignore issues of poverty, hunger, and human rights, and our abuse of the earth may all be symptoms of that unstable perceptual pyramid.

The Realigned Model

The realigned model—one that draws on both anatomic and experiential analysis—proposes that a better foundation for our humanity is to right the pyramid, acknowledging our gut-brain as our strong and stable foundation, our heart-brain at ease, resting on the wisdom of the gut, and our head-brain at the top, in a smaller, less dominant role than in the old model.



The Role of the Gut-Brain

In this realigned model, the gut-brain provides a support for the entire nervous system. Its wisdom is binary: Am I safe or am I in danger? Yes or no? The gut's intelligence is in its ability to distinguish between those two states. When we sense real danger in our guts, we can act on it and move toward safety. When we are not in mortal danger, our guts should be at ease, providing the sense of safety that allows us to pursue our higher goals. We do not need to continue to act on the basis of fear when we are not in danger.

Imagine a worm—a creature whose brain and nervous system are primarily enteric—happily foraging on the surface of a field on a sunny day. It senses a bird's shadow overhead, which means danger. It responds by tightening its muscles and digging into the earth for safety. When the perceived danger passes, the worm can return to the surface, but because it doesn't have a complex nervous system to retain the fear, it forgets that the event ever happened and it is able to relax again.

Humans are much more complex. We live in a world full of perceived threats, from the reality of potential violent harm from others to the simply daily act of crossing the street in traffic. All are potentially life threatening. Like the worm, our enteric nervous system senses danger and moves into action by tightening in a stress alarm. Many of us, however, forget to return to ease in our gut once the perceived danger has passed, forcing us to move through life with tightened viscera. The stress alarm in the gut shuts down digestion (resulting in diarrhea, vomiting, tightening, or stopped movement) and triggers an inflammatory response in the alimentary canal. Maintaining that alarm for extended periods can ultimately initiate disease processes in the gut. Equally important is the fact that, when we are in habitual distress in our gut, we are unable to love others or think as clearly as we can when our gut is at ease. We need to feel the broad foundation of safety in our gut for the rest of our lives to make sense.

Exploration: Danger and Safety in the Gut

Get in a comfortable position, and allow your breathing to be regular and easy. Let yourself drift, imagining yourself in a beautiful place in nature. Spend some time thinking of a place you love to be, where you feel safe and happy—an environment that gives you pleasure. How does your body respond? Listen to the sensation of your gut. Can it relax, spread, and find its ease?

Then shift your awareness, and picture yourself in a dangerous situation that has happened to you or one in which you have had a great deal of fear for your personal safety. Flesh the image out completely, remembering any details that you can. Notice how your gut reacts. Has it tightened? Has it reacted in another way? Has your mouth or anus tightened?

Now notice, as you move on to other thoughts, whether your gut is able to release the tension it has created. Is your head-brain able to reassure your gut that the danger has passed? Are you able to release your digestive tube completely?

The Role of the Cardiac Brain

When your gut-brain is relaxed and stable, your heart-brain has a good foundation from which to perform its role in mediating your emotional intelligence. The wisdom of the heart-brain is relational, reaching out to the world and taking in from it. It helps you recognize what you love and what nurtures you, and permits you to receive love fully. The heart's ability to experience pleasure and exhibit relational intelligence may be a function of its structure: the intrinsic nervous system of the heart (those nerves that are within the organ) is composed not of neurons, as in the central nervous system and the enteric nervous system, but of Purkinje fibers—smooth muscle cells that have adapted to

nervous system function. It makes sense that the quality of knowing in the heart is muscular in nature. Joy in the heart is meaty, like the pleasure of satisfied muscles, and heartache is reminiscent of muscle ache.

As the primary organ of fluid motion in the body, the heart is concerned with fluid dynamics.⁵ It modulates the directionality of blood flow, orchestrates the constantly changing rhythms of the body, plays a role in our emotional dynamics, and responds to—even guides—the body as it expends energy on the physical demands of work, pleasure, and reflexive responses to the environment. The heart is an organ of transformation, playing many roles in the body: it is an endocrine gland⁶, part of the circulatory system, a muscle, and a brain. It communicates with the entire body through the blood and the process of psychophysiological entrainment, by which the heart not only governs its own rhythm but also influences respiratory rhythm, blood pressure oscillation, low frequency brain rhythms, craniosacral rhythms, and electrical potentials measured across the skin.⁷

Like the gut, the heart has all the elements of a brain (sensory pathways, interneurons for information processing, and motor pathways) but is more diffuse than the enteric and head brains. This is how researchers from the Institute of HeartMath describe the cardiac brain:

Far more than a simple pump, as was once believed, the heart is now recognized by scientists as a highly complex system with its own functional "brain." Research in the new discipline of neurocardiology shows that the heart is a sensory organ and a sophisticated center for receiving and processing information. The nervous system within the heart (or "heart brain") enables it to learn, remember, and make functional decisions independent of the brain's cerebral cortex. Moreover, numerous experiments have demonstrated that the signals the heart continuously sends to the brain influence the function of higher brain centers involved in perception, cognition, and emotional processing.⁸

The heart communicates with every cell in the body, with other organs, and externally by generating an electromagnetic field 5,000 times greater than that of the head-brain. That field can be measured by magnetometers not only within the body, but also at some distance away.⁹ As part of the radiant field, each person's heart emits a code

or pattern unique to that individual. Not surprisingly, our hearts also seem to have the capacity to read or interpret the fields generated by other people's hearts, meaning that we communicate with others through the electromagnetic field at subconscious levels. Heart-to-heart communication is wisdom and information transmitted through the energy field to the knowing capacity of the heart. You probably have had the experience of meeting someone and instantly feeling or knowing that you will love or enjoy that person. Conversely, you have probably met people who repel you for reasons you may not understand. Knowing that an exchange is taking place, you can begin to listen to the wisdom of your heart more consciously and trust it to "taste" the people you come in contact with. You can develop the capacity to listen to your heart, making the subconscious conscious.

As a brain, the heart has a memory. It organizes its pulsation movement when it is kept nourished outside the body, disconnected from the central nervous system. It can change its pulsation among stored rhythms, and evidence is growing that it remembers other experiences as well. For instance, there is anecdotal evidence that after heart transplantation, the recipient often senses memories, desires, and events from the life of the donor.¹⁰ Those memories are carried into the new body, embedded within the tissues of the heart.

Exploration in a Small Group: Heart Tasting

Make yourself comfortable by breathing into the space of your heart and allowing your heart to initiate movement inside your chest.

When you feel internally focused and aware of your heart-space, stand in front of a partner at a comfortable distance and close your eyes. Listen deeply to your heart, and sense what you feel from your partner. What qualities emerge? You may experience pressure or pulling, warmth or coolness, emotions, melting, hardness, or vibration, among many possibilities. Notice how your whole body feels while you attend to your heart.

Change partners and taste another person's heart. Compare your experience with this partner to your experience with the first. How is it the same or different?

Change partners again, and continue with as many people as possible.

Finally, share your experience with your partners.

The Role of the Head-Brain (and Central Nervous System)

When both the gut-brain and the heart-brain are sensed and functioning well, the head-brain can relax. While the head-brain is undoubtedly our most complex and important brain, it is often called the “control center” of the body. But is that really its role? The true function of the head-brain (including the central nervous system) is not to be in control, but to provide original responses to new or unfamiliar stimuli and solutions to challenges that the lower intelligence centers are unable to address. Ideally we respond to a stimulus at the simplest or lowest possible level. If the stimulus requires a cellular response, we respond from the cell, as in our cellular immune responses. If it requires a response from a tissue, we respond from the tissue, as in a neuromuscular reflex arc. If it requires a reflexive response in the gut, we respond from the gut. If it requires a response from the heart, we respond from the heart.

If you continually attempt to respond to the world from your head-brain, you will live in an exhausted and frustrated state. For instance, while walking, you want to draw whenever possible on the reflexes and motor habituation that lie in the muscle tissue and in the lower centers of your spinal cord and brain stem, rather than to engage your frontal cortex to reinvent each step—the simple act of walking is actually so complex that it is impossible to coordinate using only the cortex. Similarly, you can allow the gut-brain and heart-brain to form your initial responses to the environment whenever possible so that the head-brain can be reserved for more complex issues. The head-brain can be at ease while the other brains perform their appropriate functions.

Calming the chatter and the controlling aspect of the thinking mind is a life-long process for those of us who have grown up in Western culture. Many popular pursuits—including yoga, meditation, athletics, dancing, and artistic expression—help us to calm our minds, and that is precisely why we enjoy them. From the perspective of embodied anatomy, here is an exploration that may help allow your head-brain to rest.

Exploration: Brain-Combing

Before you begin, here is a bit of anatomical information: your frontal bone is the bone of your forehead, and helps to form the roof of the eyes. Behind your eyebrows (brow ridge) a part of that bone forms a little shelf parallel to the earth if you are standing or sitting.

Breathe deeply, touching the palms of your hands to your forehead. Imagine that deep to your touch, the frontal lobes of the brain can rest on the bony shelf over your eyes. The more you drop your brain onto the shelf, the more you will relax—you will probably feel responses throughout your body.

You can reinforce the sensation by “combing” your fingers over your brain, moving them down from the top of your head, across your forehead, toward the eyebrows. Imagine that your fingertips are untangling and soothing the hyperactive brain tissue beneath them.

Balancing the Three Brains

Let’s return to the model of the realigned pyramid. The wide and stable base of the gut-brain supports the loving cardiac brain, which in turn supports the wise head-brain, resting easily at the top. This realigned model is more stable for the nervous system than the traditional, inverted-pyramid model and less exhausting to maintain. Balancing yourself in this paradigm requires attention to each physiological center of wisdom and the ability to sense the relationships—and the differences—among them. You might have to ask: Is my gut being too reactive? Is my heart leading me in ways that are inappropriate? Is my head-brain being too controlling? The quest to acquire and maintain balance is ongoing, deeply personal, and usually imperfect. It requires a commitment to monitor your body, mind, psyche, and spirit. It is a difficult path, not for the faint-hearted, but great rewards emerge from the practice—rewards such as being able to walk with a sense of freedom, being able to give and receive love, and being at peace with the world around you.

Part of what’s needed to balance the three brains is to ensure that the physical pathways are available to carry information among them. For instance, tightness in the diaphragm might diminish communication between the heart and the gut, and hyperextension of the neck might restrict the flow of sensation between the head and the heart. Here is an exercise involving gentle touch that can support you in making sure that each of your wisdom centers is available to the others. It is a trio partnering exploration, but it can be adapted to allow you to work alone.

Exploration: Pathways of Flow Among the Gut, Heart, and Head

Allow one person of the trio to get comfortable on the floor, starting supine but free to change to other positions as the exploration progresses. Invite that partner to breathe and release his weight into the earth.

The other two partners should now place their hands on the supine partner, at the head, the heart, and the belly. (Negotiate whose hands go where, improvising as needed.) The objective is to support a flow of sensation among the three centers. The supine partner can assess whether there is a sense of connection between his head and heart, heart and gut, and gut and head.

Where the connection between any of those centers is inhibited, tight, or un-embodied, you should reposition your hands between those centers to facilitate connection. For instance, if flow between your partner's heart and head seems inhibited, you may position your hands on his neck. Allow the exploration to proceed as an improvisation among the three of you. You may reposition your partner in space, concentrate on a single spot on his body, or add gentle movement. The objective remains that the receiving partner should be able to sense a flow of connection among the three brains.

Spend as much time as you can with this exploration, and change roles so that each partner receives hands-on facilitation.

In addition to working with your body to make sure that the pathways of flow are established and open, it is helpful to experiment with assessing your habits of response in different situations. You may be able to anticipate when and how you might respond—whether with your head, heart, or gut—and balance your responses as necessary.

For those of us whose habit of mind is to run in circles and who respond to the world primarily through the head-brain, embodying the three centers of wisdom can be liberating as a new way of experiencing life. If you choose to experiment with this approach—at home, as you work, teach, and learn, and in activities of daily life—ask yourself if you feel supported to move through the process of change and experience yourself in a new way. Take care that you feel the invitation for change in your current environment, including your life situation, your family and friends, your physical space, and the natural world. If you feel supported in the present moment to realign your centers of wisdom, you may gain access to yourself at the most profound level and enjoy living at your fullest potential.

Notes

¹ Michael D. Gershon, *The Second Brain: A Groundbreaking New Understanding of Nervous Disorders of the Stomach and Intestine* (New York: HarperCollins, 1999) 3.

² J. Andrew Armour, M.D., Ph.D., *Neurocardiology: Anatomical and Functional Principles* (Boulder Creek, CA: Institute of HeartMath, 2003) 1.

³ Michael D. Gershon, *The Second Brain: A Groundbreaking New Understanding of Nervous Disorders of the Stomach and Intestine* (New York: HarperCollins, 1999) 17.

⁴ J. Andrew Armour, M.D., Ph.D., *Neurocardiology: Anatomical and Functional Principles* (Boulder Creek, CA: Institute of HeartMath, 2003) 7.

⁵ Craig Holdrege, ed., *The Dynamic Heart and Circulation* (Fair Oaks, CA: AWSNA, 2002) 7.

⁶ M. F. McGrath, M. L. K. de Bold, and A. J. de Bold, "The endocrine function of the heart," *TRENDS in Endocrinology and Metabolism* Vol.16 No.10 (2005): 469.

⁷ Rollin McCraty et al., *The Coherent Heart: Heart–Brain Interactions, Psychophysiological Coherence, and the Emergence of System-Wide Order* (Boulder Creek, CA: Institute of HeartMath, 2006) 44.

⁸ Rollin McCraty et al., "The Resonant Heart," *Shift*, no. 5 (December 2004), www.shiftinaction.com/node/119. p. 15

⁹ McCraty, Rollin, "The Energetic Heart: Bioelectromagnetic Interactions Within and Between People," (Boulder Creek, CA: HeartMath Research Center, Institute of HeartMath, Publication No. 02-035. 2002, p. 1)

¹⁰ Paul Pearsall, *The Heart's Code* (New York: Broadway Books, 1998) 75–98.